

Do Infants Fed Rice and Rice Products Have an Increased Risk for Skin Cancer?



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To the Editor:

Rice and rice products, such as rice cereal and rice snacks, contain inorganic arsenic. Exposure to arsenic in utero and during early life may be associated with adverse fetal growth, adverse infant and child immune response, and adverse neurodevelopmental outcomes. Therefore, the World Health Organization, the Food and Agriculture Organization of the United Nations, the European Union, and the US Food and Drug Administration have suggested maximum arsenic ingestion recommendations for infants: 100 ng/g for inorganic arsenic in products geared toward infants. However, infants consuming only a few servings of rice products may exceed the weekly tolerable intake of arsenic.

Karagas et al¹ obtained dietary data on 759 infants who were enrolled in the New Hampshire Birth Cohort Study from 2011 to 2014. They noted that 80% of the infants had been introduced to rice cereal during the first year. Additional data on diet and total urinary arsenic at 12 months was available for 129 infants: 32.6% of these infants were fed rice snacks. In addition, the total urinary arsenic concentration was higher among infants who ate rice cereal or rice snacks as compared to infants who did not eat rice or rice products.

Chronic arsenic exposure can result in patchy dark brown hyperpigmentation with scattered pale spots referred to as “raindrops on a dusty road.” The axilla, eyelids, groin, neck, nipples, and temples often are affected. However, the hyperpigmentation can extend across the chest, abdomen, and back in severe cases.

Horizontal white lines across the nails (Mees lines) may develop. Keratoses, often on the palms (arsenic keratoses), may appear; they persist and may progress to skin cancers. In addition, patients with arsenic exposure are more susceptible to developing nonmelanoma skin cancers.²

It is unknown if exposure to inorganic arsenic in infancy predisposes these individuals to skin cancer when they become adults. Long-term longitudinal follow-up of the participants in this study may provide additional insight. Perhaps infants should not receive rice cereals and rice snacks or their parents should more carefully monitor the amount of rice and rice products that they ingest.

REFERENCES

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The author reports no conflict of interest.

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